

June 6.

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TAFT AGAINST ALL AMENDMENTS.

Senator Lodge's Fishery Movement Stirs Up Canadians.

Latter Claim That Country is Un- able to Agree to It.

Reciprocity continues to be the all-absorbing topic in political and governmental circles in Washington. President Taft has caused it to be known, through Senator Stone, that he is opposed to any change whatever in the bill, even to the extent of the Root pulp charge.

Today the senate committee on finance will take up the discussion, in committee, of the amendments and the form of reporting the bill.

The amendment which Senator Lodge has in mind to make, regarding the fisheries clause of the bill, has stirred things up, not only at Washington, but also at Ottawa and Nova Scotia. Even Newfoundland is interested and some of the papers down that way predict that the Lodge amendment should it pass, would mean that the modified bill would never be adopted by Canada.

Speaking of the Lodge proposed fisheries amendments to the reciprocity bill, an Ottawa dispatch says:

"The government of Canada is helpless to meet the Lodge proposal in any way, inasmuch as the \$4,500,000 obtained under the Halifax award and which means \$180,000 annually to the Canadian inshore fishermen, is

a fund which the government simply administers and cannot abolish.

"The Lodge amendment thus aims a blow at the pact which cannot be warded off by any action of the Canadian authorities. The most that the Canadian government could do would be to abandon the Canadian policy under which the transportation charges on fish from the Maritime provinces to the Ontario market are partly paid out of the Dominion treasury, but to do this would be to injure the Ontario market and hurt the eastern fisherman and there is no suggestion that this would be satisfactory to the Gloucester interests for whom Senator Lodge is acting."

Public hearings on the reciprocity bill were concluded by the senate finance committee yesterday. Representatives of the American newspaper publishers' association and of the Associated Press were the last to appear before the committee.

Judge W. R. Green, Republican, was elected to congress at Council Bluffs, Iowa, yesterday, to fill the vacancy caused by the resignation of Judge Walter L. Smith, by an estimated plurality of 1200. His opponent was W. S. Cleveland of Harlan. The Canadian reciprocity agreement was the issue, Judge Green declaring against the pact.

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SCH. LORNA DOONE SAILS.

Former Gloucester Vessel Now
Missionary Craft.

Dr. Wilfred T. Grenfell's missionary schooner Lorna Doone, Capt. Fradsham, is ready to sail from Boston for St. Anthony's, N. F., filled with hospital supplies, clothing, books, etc. She also has 36 barrels of oil, and 21 tons of coal. The schooner, which was formerly a well known fishing craft of this port, took out clearance papers at the custom house yesterday.

Steam Trawler Coquet Will Return to Scotland.

After experimenting on this side of the Atlantic for almost a year, says a Canso, N. S., dispatch, the owners of the steam trawler Coquet, have decided to abandon fishing in these waters and return to Scotland. The Coquet has given the steam trawling a very thorough trial and it is understood the result has not been satisfactory from a financial point. There were good results of last fall's operations, but the severe winter so tied things up, that her owners became somewhat discouraged with delays and small results, and have decided to return home.

The Coquet is one of the larger trawlers, and somewhat expensive to operate. The short season and small market for some kinds of fish caught by the trawling method did not make the project profitable. Early this spring the craft landed three small fares at Fulton market New York.

A smaller trawler, the Wren, still remains on this side, and will be operated in these waters during the season.

Hard Luck Following Sch. Rigel.

Bad luck seems to follow the Newfoundland fishing sch. Rigel, formerly one of the best known fishing vessels of this port, which put into North Sydney, C. B., about 10 days ago to land Capt. John Harvey for medical treatment, and who died shortly afterwards at the Hamilton hospital, following an operation for appendicitis. Friday morning two more of the Rigel's crew were landed there by the sch. Marconi, which picked up the men on the banks after they had gone astray from their vessel in a heavy gale on Wednesday.

It is feared that disaster has also overtaken a dory containing two men belonging to the Newfoundland fishing sch. Violet Courtney, as the report to this effect, so far unconfirmed, as brought to North Sydney Capt. Fudge, of the sch. Grace Tibbo, which arrived from the banks on Wednesday.

Lunenburg Salt Bankers.

Among the recent arrivals of the Lunenburg, N. S., salt bank fleet at the home port, are the following: Sch. Benj. C. Smith, 600 quintals; sch. Clintonia, 1200 quintals; sch. Gladys B. Smith, 1200 quintals; sch. Mayola, 800 quintals; sch. Acadia, 600 quintals; sch. Douglas Adams, 400 quintals; sch. Beatrice Mack, 600 quintals; sch. Carrie L. Hirtle, 400 quintals; sch. Tasmania, 700 quintals.

Portland Fish Notes.

Fish receipts have been very light the past few days and the herring catchers, who made such a spurt a week ago, have not done much of late. About 25 barrels of large herring were brought in Sunday by the sloop Isabel Parsons, the receipts of Saturday having been only about 50 barrels, brought in by the steamer Elthier and Capt. Mel McLean's little sloop.

A Valuable Fish Cargo.

The tern schooner "Evelyn" cleared from Halifax Thursday, for Pernambuco, Brazil, with a cargo of dry codfish, and haddock. The cargo consisted of 1402 drums and 3204 half drums dry codfish valued at \$24,000, and 100 half drums haddock valued at \$400. This vessel has been loaded by Job Brothers & Co., Ltd., of Halifax.

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Halibut Sales.

The fare of sch. Margaret at Portland yesterday sold at 8 cents per pound for white, 5 cents for medium gray and 4 cents for large gray.

This morning the fare of Quero bank halibut of sch. Effie M. Prior sold to the American Halibut Company at 9 cents per pound for white, 7 cents for gray and 4 1-2 cents for chickens.

SMALL FARES AT T WHARF.

FIFTEEN VESSELS THIS MORN-
ING SOLD TRIPS TO GOOD
ADVANTAGE.

The 15 arrivals at T wharf this morning got the full benefit of a good market on all kinds of fish. There were no large fares in the lot, the steam trawler Foam with 45,000 pounds and sch. Lochinvar with 43,000 pounds topping the lot.

Five of the Provincetown market fleet are in, most of them with good market catches, while sch. Philip P. Manta, from the eastward did not strike fish very heavy and has only a few fish and 5000 pounds of halibut.

Haddock sold at \$2.25 and \$3, while large cod soared to \$6 and \$6.75, with market cod going at \$4 and \$5. Hake ranged from \$1.25 to \$3.25, cusk \$2 to \$3 and pollock were up to \$3.

Boston Arrivals.

The receipts and prices in detail are: Sch. Natalie J. Nelson, 18,000 haddock, 3000 cod.

Sch. Philip P. Manta, 1000 haddock, 4500 cod, 600 pollock, 5000 halibut.

Sch. Galatea, 2000 haddock, 15,000 cod.

Sch. Mildred V. Nunan, 2000 cod, 19,000 hake, 4000 cusk.

Sch. Lochinvar, 3000 cod, 40,000 hake, 3000 cusk.

Sch. Annie Perry, 3000 haddock, 13,000 cod.

Sch. Rose Standish, 1200 haddock, 700 cod, 9000 hake.

Steamer Foam, 4200 haddock, 500 cod, 2000 hake.

Sch. Robert and Arthur, 20,000 haddock, 5000 cod, 5000 hake, 800 halibut.

Sch. Mary C. Santos, 6000 haddock, 11,000 cod.

Sch. Harvester, 12,000 haddock, 7000 cod.

Sch. Walter P. Goulart, 11,000 haddock, 2000 cod.

Sch. George H. Lubee, 3000 haddock, 2000 cod, 31,000 hake.

Sch. Ignatius Enos, 1000 cod.

Sch. Isabel, 2100 cod.

Haddock, \$2.25 to \$3 per cwt.; large cod, \$6 to \$6.75; market cod, \$4 to \$5; hake, \$1.25 to \$3.25; cusk, \$2 to \$3; pollock, \$3.

Fulton Fish Market Notes.

All things considered, trade was brisk in the salt water fish market last week. There was an abundance of all varieties of fish and with few exceptions prices were low.

Codfish—There was only one trip of smack fish in the market last week. Early in the week prices were low, market cod selling at 3 cents. On Thursday the price had reached 7 cents. Steak cod, which sold at 6 cents brought 11 cents to a shilling.

Haddock sold at 4 cents to 6 cents. Hake—During the early part of the week the price was 2 cents to 3 cents. There was none in the market the last three days.

Halibut—Western white halibut was low in price last Saturday, selling at 7 cents per pound. On Monday it brought the same price. Tuesday there was an advance of a cent a pound. Friday it had crept up to 11 cents to a shilling. There was no eastern halibut in the market.

Pollock sold at 4 cents to 5 cents the latter part of the week. On Tuesday it was down to 1 1/2 cents.

Sch. Conqueror Made Big Stock.

Sch. Conqueror, Capt. Robertson Giffin, stocked \$4444 as the result of her recent big Cape North salt and fresh codfish trip, the crew making the fine share of \$112. The trip, which was the best of the season thus far, in that line of the fishery, sold to F. F. Smith & Co., the salt cod bringing \$4 per hundred weight for large and \$3.50 for medium and the fresh cod \$2.25 for large and \$1.75 for mediums.

Sch. Monitor, Capt. George Marr, stocked \$3200 on her recent short halibut trip, the crew sharing \$77.83.

Found Whale in Net.

The fishing sloop Alice G. of Orr's island was at Portland yesterday afternoon with 50 barrels of herring. While off Halfway rock in 35 fathoms of water the crew tried to pull in their net and found a 40-foot whale entangled in the meshes, and it practically ruined the seine when it broke away.

FISH RECEIPTS ARE PLENTIEUL.

MANY VARIETIES LANDED BY
SCHOONERS AT THIS
PORT TODAY.

The pollock still hold out. Sch. Evelyn L. Thompson came in this morning with 100,000 pounds, all taken in one school on the Rips. The craft went out Saturday night and had just time to go that 70 miles down to the fishing grounds, sight the one school and grab it up and glide back to port. Sch. Fish Hawk is also in with another of her big catches of pollock, hailing this time for 120,000 pounds. Coming along home Capt. Nickerson saw a small school of herring off here, made a set and took in 15 barrels and then came in. Sch. Margie Smith had 10,000 pounds of pollock.

Sch. Teazer came down from Boston with 10,000 pounds of fitches and 35,000 weight of fresh cod, having landed her big fare of 70,000 pounds of fresh halibut at T wharf. Sch. Margaret, which landed 40,000 pounds of halibut at Portland yesterday, came in this morning, bringing with her 25,000 pounds of fitched halibut and 10,000 pounds of salt cod, all of which together will make up a fine stock, for the craft, which fished at Anticosti, has been gone only a month, making two Magdalen bairtings.

From Quero bank, and gone about three weeks, sch. Effie M. Prior, Capt. Elroy Prior, came in this morning with 115,000 pounds of fresh cod and 6000 pounds of halibut. This craft baited at the Magdalen. On her next trips she will take salt and ice and Capt. Prior is figuring on striking the first run of caplin.

Sch. Flora J. Sears, from a shore trip, brings 40,000 pounds of fresh fish.

The small seiners got more herring yesterday. Steamer Quartette had another load of 120 barrels and the steamers Prince Olaf and Eagle and schs. Mary Emerson and Georgianna also had some. Steamer Herbert and Emma had 30 barrels.

Today's Arrivals and Receipts.

Sch. Thalia, Georges, drifting, 35,000 lbs. salt cod.

Sch. May E. Smith, shore.

Sch. Valentinna, returned.

Vessels Sailed.

Sch. Jeanette, haddocking.

Sch. Ellen C. Burke, shacking.

Sch. Sadie M. Nunan, shacking.

Sch. Mary A. Gleason, Georges.

Sch. Reliance, pollock seining.

TODAY'S FISH MARKET.

Salt Fish.

Trawl bank codfish, large, \$4.00; medium \$3.50.

Handline Georges codfish, large, \$5; medium, \$4.75; snappers, \$3.

Peak and Western bank fresh codfish, \$2.25 per cwt.; for large and \$1.75 for mediums.

Salt "Drift" codfish, large, \$4.75; medium, \$4.37 1/2.

Trawl Georges codfish, large, \$4.75; medium, \$4.25.

Eastern halibut codfish, large, \$4.59; medium, \$4.

Haddock, \$1.25.

Pollock, \$2.

Cusk, large, \$2.50; medium, \$2; snappers, \$1.50.

Hake, \$1.75.

All codfish with napes picked bring 25c over the above prices.

Fresh Fish.

Fresh large mackerel 25 cents each.

Haddock, \$1.15 per cwt.

Large cod, \$2.40 per cwt.; medium, \$1.85 per cwt.

Peak and Western bank fresh codfish, \$2.20 per cwt. for large and \$1.75 for mediums.

Cusk, large, \$1.75; mediums, \$1.25; Hake, \$1.00.

Dressed pollock, 90 cts., round, 80 cts.

Georges halibut, 8c per lb. for white and 6 1-4 cts. for gray.

Bank halibut 9c per lb. for white and 7c for gray, and 4 1/2c for chicken.

Fresh "drift" codfish, large, \$2.60 per cwt.; mediums \$2.05.

Cape North cod, \$2.30 for large and \$1.75 for mediums.

PORT OF GLOUCESTER.

Coastwise Arrivals.

Tug Nellie, Boston.

Tug Irvington, Portsmouth.

Tug H. A. Mathias.

Steamer Massasoit, Searsport, Me., for Boston, towed in disabled.

SOUTHERN WATERS ALIVE WITH FISH.

Netters Report Vast Quantity of Mackerel in Spawn.

Capt. George Peoples of the mackerel netting sch. Lafayette, which was at Newport, R. I., yesterday with a good fare, came home last night. He reports an easterly out that way and all the netters remained in port yesterday after taking out their fares. Quite a number came in during the day and the chances are they will all remain in today as the wind is still to the eastward and the weather stormy. The mackerel sold yesterday at Newport at 16 cents per fish.

Some of the skippers shipped their fish to New York and those who did got 20 cents. One boat, the Bernie and Bessie, shipped her catch to Portland, to Trefethen, for 20 cents per fish.

Capt. Peoples brings a very interesting and encouraging report of mackerel conditions out that way. He says that most of the larger netters have done considerably better to date than they did last season up to this time, and most of them are, in the face of present conditions, looking for the best of the season yet to come, and as long as the fishing continues as it is they will be in no hurry to come home and fit for swordfishing. Some of the netters have already stocked from \$2500 to \$3500.

Capt. Peoples says that not for five or six years has the mackerel prospect out that way been as good as at present, both for seiners and netters. He says that of course, in speaking of mackerel, it must be taken into account, that no one can tell what is liable to happen and that things can change quickly, and certainly at present the prospects are rosy. In this statement all of the netting skippers out there agree and are looking forward to good doings.

The captain reports mackerel schooling all the way from Fire Island to Sankaty Head and South Shoal lightship and the netters are also getting fish over the same stretch of fishing ground, which is quite a wide range. Off Shinnecock, about ten miles, where he got his fare landed yesterday, the captain reports lots of fish schooling and on Sunday, while setting on the wheel-box, he counted eight fine large schools in sight at once.

On the same day, sch. Mabel Bryson, Capt. Joseph Sampson, was fishing 40 miles west of the South Shoal lightship and was among lots of fish. Not only did the Bryson get big fishing herself, 2500 in one night on a 40 net set, but Capt. Sampson reported that for mackerel schooling he had not seen the like for years. There were large schools and they were to be seen in all directions, the day being fine.

The weather generally speaking, Capt. Peoples, reports, has been fine, so fine that the boats have burned up an extra amount of gasoline making the passages to the grounds and back to port. The fish are late in spawning and only since the first of June have they begun to spawn. This the skippers also consider a good sign of a good and long continued season. Like most all mackerel men they figure that the mackerel have been late in coming along. They opine that the big body of fish which the seiners struck way off shore and could do nothing with because they were so wild were the fish

which go to the Cape Shore, while the fish which have been reported since middle of May off Barnegat and Fire Island, and to the westward, are the regular southern school of fish.

The captain says the bluefish have been plenty and one night he took 70 in his nets, while another craft got 200 or more. There are lots of weakfish also, and the water is alive with sharks, this latter state of affairs being noticed off New York, as well as to the eastward, something not common. The first swordfish of the season was taken by the Hockomock in one of her nets and landed at New York, where it was bought for the big price of 28 cents per pound. The fish brought \$67.

On Saturday, when 10 miles south-east of Shinnecock, Capt. Peoples caught two Spanish mackerel in his nets, an unusual occurrence in that locality.

Summing up the whole "look" out there at present Capt. Peoples says "You know, in predicting or figuring what mackerel are going to do, you never can tell, but at present the outlook for mackerel fishing out that way is certainly the best and most encouraging I have seen it for the past five or six years."

Good weather is reported on the Cape Shore Saturday and Sunday. Yesterday, the Halifax crafts which always fish off Sambro, with seines, took 10,000 mackerel, landing them at Halifax.

A few of the netting fleet are at New York this morning with fair catches, while at Newport since yesterday morning's report, a large fleet has arrived. Some of them have small fares, while others did pretty well. Sch. Hockomock, which is in the lot, brought in the largest netting fare of the season thus far, hauling her catch for 5400 fish in count.

Several large schools of mackerel were sighted 25 miles south-southwest of Shinnecock Light Sunday by officers of the Ocean line steamer City of Macon, which arrived at Boston yesterday morning from Savannah. A number of whales were seen pursuing the mackerel, which were very wild. Close in toward shore, a fleet of seiners were passed.

Netters at Edgartown.

Edgartown reports the following mackerel netting arrivals yesterday: Sloop Ethel M. with 1400 fish in count, sloops Gem 1100 fresh mackerel, Priscilla 500 fresh mackerel, Mildred J. 400 fresh mackerel, Columbia 400 fresh mackerel and six smaller boats with 1200.

New Bedford reported 17 arrivals with a total of 15,750 fish. The boats and their catches were: The Gracie Smith with 3400 fish in count, Mary P. Hackett 1400, Two Sisters 1800, Nickerson 1000, Jessie 1300, Gypsy Maid 1000, Active 1700, Crescent 1500, Torpedo 800, Muriel 800, Lena 500, T. D. 400, Mary B. Souza 100, and the dory Mary Ann with 250.

Netter at Provincetown.

Sch. Little Jennie had 400 fresh mackerel at Provincetown yesterday, the fare being taken close to that harbor.

Netters at Newport.

Sch. M. Madeline, 2700 fresh mackerel.
Sch. Nokomis, 1200 fresh mackerel.
Sch. Hobo, 1200 fresh mackerel.
Sch. Cherokee, 1200 fresh mackerel.
Sch. Condon, 1200 fresh mackerel.

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Shackers Stormbound at Magdalen Islands.

A letter received here last night from the Magdalen island, from one of the shack fleet, reports that a severe storm was experienced there June 2 and adds that quite a number of the fleet were there and held up for bait, which was scarce.

Provincetown Fish Company Burned Out.

The Union Fish Company's building at Provincetown was destroyed and Railroad wharf was badly damaged by a fire which started in a shed on the wharf there yesterday. The loss is estimated at \$15,000. The cause of the fire has not been determined.

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Newport Fish Notes.

Three hundred barrels of scup went to Philadelphia and New York and 100 barrels of mixed fish went about New England yesterday.

Capt. Patterson of the steamer Success caught 6000 pounds of flounders in Narragansett bay, the largest single day's catch in years. These went into cold storage here.

Fog Whistle Disabled.

The fog whistle on Hen and Chickens lightship, No. 42, at the entrance to Buzzard's bay, is reported disabled and not sounding. It will be repaired as soon as practicable. In the meantime the fog signal will be a bell rung by hand.

Halibut at Portland.

Sch. Mary T. Fallon is at Portland today with 10,000 pounds of halibut.

Sch. Eagle, 700 fresh mackerel.
Sch. Maud Gertrude, 400 fresh mackerel.
Sch. Hamilton, 1100 fresh mackerel.
Sch. Pearl, 250 fresh mackerel.
Sch. Hockomock, 5400 fresh mackerel.
Sch. Blanche F. Irving, 2700 fresh mackerel.
Sch. Marguerite S. McKenzie, 1100 fresh mackerel.
Sch. J. F. McMorrow, 1100 fresh mackerel.
Sch. Freedom, 700 fresh mackerel.
Sch. On Time, 700 fresh mackerel.
Sch. Nettie, 700 fresh mackerel.
Sch. Fitz A. Oakes, 700 fresh mackerel.

Sch. Mabel E. Leavitt, 700 fresh mackerel.
Sch. Alice, 700 fresh mackerel.
Sloop Wodan, 300 fresh mackerel.
Sloop Sarah, 400 fresh mackerel.
Sch. Dixie, 300 fresh mackerel.
Sch. Silver, 600 fresh mackerel.
Sch. Reliance, 700 fresh mackerel.
Sch. Jessie, 300 fresh mackerel.
Sch. C. A. Dolliver, 800 fresh mackerel.

Sch. Massasoit, 2800 fresh mackerel.
Sch. Clara T., 2400 fresh mackerel.
Sch. Wood and Mack, 1400 fresh mackerel.

Sch. Hersey D. Taylor, 1200 fresh mackerel.

Sch. City of Everett, 1200 fresh mackerel.

Sch. W. H. Clement, 1100 fresh mackerel.

Sch. Golden Eagle, 1200 fresh mackerel.

Netters at New York.

Sch. Lear C., 1200 fresh mackerel.
Sch. Manomet, 1400 fresh mackerel.
New York is quoting Boston 22 cents on mackerel today.

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CULTIVATING CLAMS.

New Bedford to Try the Project of Increasing Flat Yield.

A New Bedford shell fishery commission established by the present legislature has interest to the clambers of this section now that an effort is being made to restrict an area there on which clams may be taken for food purposes. In the whole upper harbor of New Bedford an order of the state board of health forbidding the taking of shell fish for food purposes is in force. This new legislation makes the mayor of the city and the selectmen of the town on the opposition of the harbor a commission to grant licenses for the taking of shell fish, to designate places where they shall be landed and allows their transplanting in other flats for a sufficient length of time to purge themselves of any impurities when they can be taken up and sold for food purposes.

June 7.

STILL AFTER THE DOGFISH.

C. E. DAVIS APPEALING TO CONGRESSMEN FOR FAVORABLE ACTION.

C. E. Davis of Orr's Island, Me., who has worked early and late for many years to induce the government to take some action against the dogfish which are the bane of New England fishermen, is not wearying in his well doing.

Mr. Davis has received a letter from the bureau of fisheries, stating that the administration can do nothing without congressional action, and he is now engaged in a campaign to have the matter taken up by the legislative body.

He has recently written a 10-page letter to Congressman Hinds asking him to take the initiative in the matter, and he said last night that he would follow this up with other appeals.

Mr. Davis's plan is for the government to establish reduction works for turning the fish into oil and fertilizer and pay the fishermen a sufficient bounty so that they can afford to handle them.

"It is the testimony of hundreds of fishermen that if such action is taken the number of dogfish would be appreciably diminished while the food fish would show a corresponding increase," said the Orr's island man.

June 7.

TRIED LONG LINE TRAWL.

CAPTAIN OF SCH. TEAZER THINKS IDEA WILL PROVE SUCCESSFUL.

Capt. Peter Dunskey of sch. Teazer, which on her recent fresh halibut voyage, was fitted with the outfit for the English long line fishing, with a chute for the setting and an engine for hauling of the trawls from the deck, is inclined after the first brief trial of the same to the belief that the method will prove a success in these waters.

On the first trip which the craft has just completed, and which was in the nature of an experiment, as far as the new gear and method are concerned, the captain took but a small string of the new trawl with him. With what he had, he found that the apparatus, the engine for hoisting in the trawl, the chute for letting it out over the quarter and the winch and leaders for taking it along the slide in hauling, all worked in quite a satisfactory manner, but on the ground where he was fishing, off Anticosti, he did not have enough of the new trawl to make the sets the weather gave him the opportunity to stick out.

Finding himself on plenty of fish and with fine weather, he just tried the new arrangement a few times to assure himself that it would work all right with the proper length of trawl for the ground and finished up his fishing in the regular way—with the dories and skates set and hauled in the usual manner.

This time out Capt. Dunskey will add greatly to the length of his long line trawl and experiment in deep water. He is confident of its success although he says that on rough days there is some trouble with the trawl, as it is hauled, getting tangled with the bowsprit, but this difficulty he hopes to overcome.

June 7.

LIFE IN THE OCEAN DEEP.

Animals 900 Fathoms Down Are in Densest Darkness.

The colors, phosphorescent, organs, and remarkable organs of sight of the animals in the different layers are evidently correlated with the distribution of the sun's rays in sea water; consequently our expedition's naturalists made some interesting experiments bearing on this subject.

Professor Heland-Hansen by means of an apparatus he had constructed succeeded in exposing photographic plates at various depths for any desired length of time, and by using panchromatic plates he was able to ascertain the different depths to which red, green and blue rays could penetrate. His experiments revealed that considerable quantities of light penetrated down to 500 fathoms, whereas at 900 fathoms the plates were not affected even after an exposure of two hours.

At a depth of 300 fathoms the light consisted principally of ultra-violet rays, while rays which were seen by the human eye were only present in

extremely small quantity. The red and green rays could not be detected at 300 fathoms even after an exposure of 40 minutes; on the other hand the blue rays were noticeable. At a depth of 50 fathoms during brilliant sunshine and after an exposure of two hours all colors of light were found, there being least of red, rather more of green and by far the largest part of blue and ultra-violet, says Sir John Murray in Harper's Magazine.

All the red and black pelagic animals which the expedition captured at depths below 300 fathoms float in a layer of water untouched by any of the sun's rays that we can see; their colors may be assumed than to render them invisible when viewed from above. Those marine creatures which are provided with phosphorescent apparatus can shed light for a short distance into the obscurity around them.

On the other hand, the transparent crystal-clear, and blue colored animals which occupy the surface layers must in their turn be invisible to the animals of the deeper layers when looked at from beneath.